

## TEST PLAN

Phenol, 2-[(2-methyl-2-propenyl)oxy];  
Methallyloxyphenol (MOP)  
CAS No. 4790-71-0

STUDY	INFORMATION (Yes or No)	OECD STUDY (Y/N)	GLP (Y/N)	OTHER STUDY (Y/N)	ESTIMATION METHOD (Y/N)	ACCEPTABLE (Y/N)	SIDS TESTING REQUIRED (Y/N)
<b>Physical/Chemical Properties</b>							
Melting Point	No						No
Boiling Point	Yes	No	No	Yes	No	Yes	No
Vapor Pressure	Yes	No	No	Yes	No	Yes	No
Partition Coefficient	No						Yes
Water Solubility	No						Yes
<b>Environmental Fate and Pathways</b>							
Photodegradation	Yes	No	No	No	Yes	Yes	No
Hydrolysis	No						Yes
Fugacity	Yes	No	No	No	Yes	Yes	No
Biodegradation	No						Yes
<b>Aquatic Toxicity</b>							
Acute Toxicity to Fish	Yes	No	Yes	Yes	No	Yes	No
Acute Toxicity to Daphnia	No						No
Acute Toxicity to Mysid Shrimp	Yes	No	Yes	Yes	No	Yes	No
Toxicity to Algae	Yes	No	Yes	Yes	No	Yes	No
<b>Mammalian Toxicity</b>							
Acute Inhalation	No						No
Acute Oral	Yes	No	Yes	Yes	No	Yes	No
Genotoxicity <i>In Vitro</i> (Bacterial Test)	Yes	Yes	Yes	No	No	Yes	No

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# TEST PLAN (continued)

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<b>Mammalian Toxicity</b>							
Genotoxicity <i>In Vitro</i> (Mammalian Cells)	Yes	Yes	Yes	No	No	Yes	No
Genotoxicity <i>In Vivo</i> (Chrom. Aberrations)	Yes	Yes	Yes	No	No	Yes	No
Repeated Dose	No						No*
Reproductive Toxicity	No						No*
Developmental Toxicity	No						Yes*

- Reduced testing requirements for Closed-System Intermediates. Actual initiation of Developmental Toxicity testing is deferred until 2003 as instructed by EPA guidance.

Methallyloxyphenol (MOP) is produced as an in-process intermediate in the 7-Hydroxy Process in the FMC Baltimore Plant.

7-Hydroxy Process Description: (also see process flow diagram)

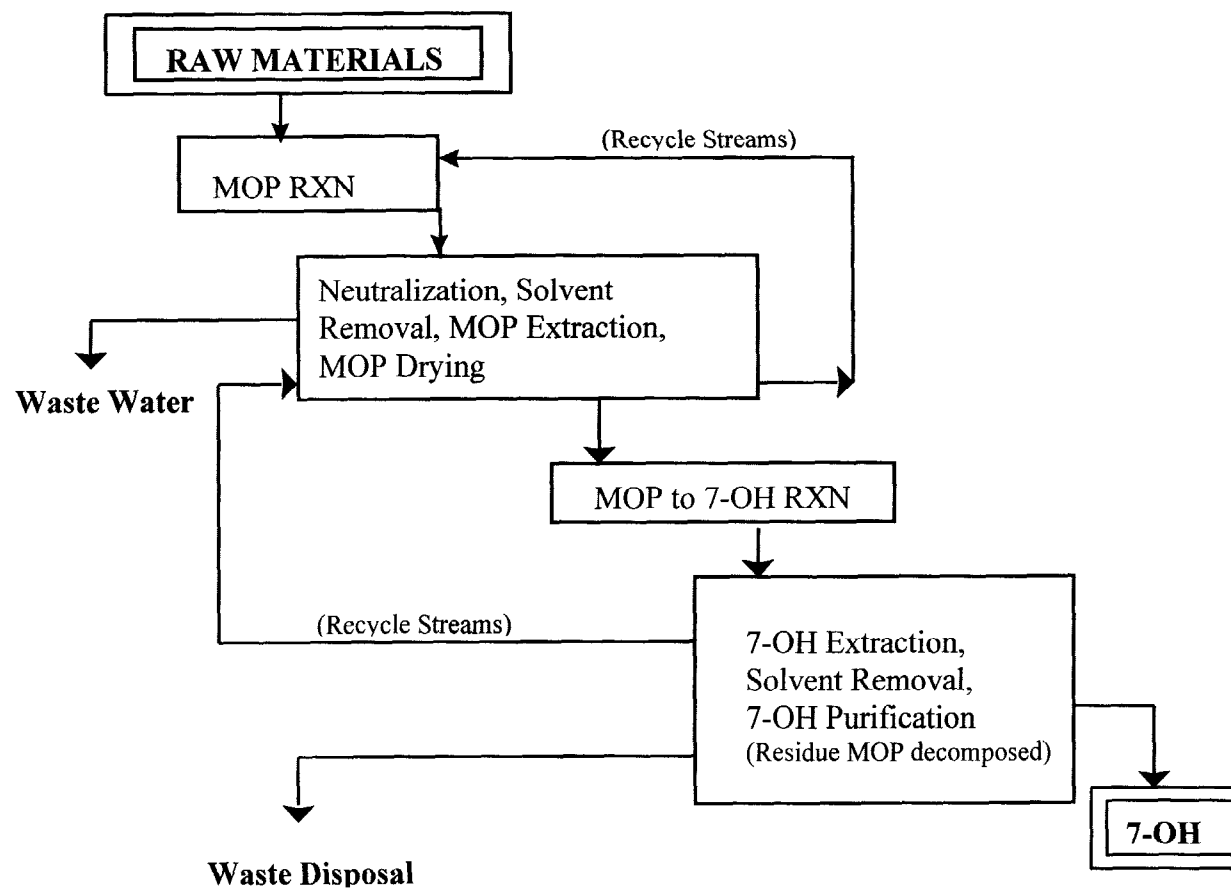
**STEP 1: MOP Reaction**

- A. MOP Reaction** - Purpose is to produce crude MOP in a batch reaction at elevated temperatures and pressures.
- B. Neutralization, Solvent Removal, MOP Extraction, MOP Drying** - Purpose is to prepare the MOP for reaction in Step 2.

**STEP 2: 7-Hydroxy Reaction**

- A. MOP to 7-OH Reaction** - Purpose is to react the MOP into 7-OH at elevated temperatures and pressures. Less than 0.3% MOP remains after reaction and that is degraded during purification.
- B. 7-OH Extraction, Solvent Removal, 7-OH Purification** - Purpose is to clean up the 7-OH for a final product assay of 98.7% or more.

Process Flow Diagram:



### Monitoring Data:

#### *Wastewater Monitoring-*

All aqueous streams from the 7-Hydroxy process are directed through a wastewater stripper to remove solvents and then sent to on-site wastewater treatment prior to discharge to the Public Owned Treatment Works (POTW). On-site wastewater treatment consists of carbon beds through which MOP concentration and removal efficiency are monitored daily. The average MOP concentration into the carbon beds for 2001 year-to-date is 143 ppm. The average MOP concentration out of the carbon beds for 2001 year-to-date is 2 ppm. These numbers translate to an average MOP removal efficiency of 98.6% for 2001 year-to-date. This removal efficiency is well above the minimum limit of 93%.

#### *IH Data-*

Air and personnel exposure (sampling and normal job duties) monitoring for MOP in the 7-Hydroxy process area were performed in 1986, 1988 and 1990. This monitoring found the air and personnel exposure concentration of MOP at an average of 5.4 ppb. This is well below the 8-hour exposure limit for MOP of 4,900 ppb.

### Presence in Distributed Product:

Presence of MOP in finished 7-Hydroxy is < 0.1%. 7-Hydroxy product chemistry demonstrates that the MOP is degraded during high temperature purification.

Also, 7-Hydroxy is an intermediate used to make Carbofuran. The Carbofuran Confidential Statement of Formula (CSF) does not list MOP due to the five-batch analysis demonstrating MOP levels at < 0.1% in the product.

### Transport Data:

MOP is not transported outside of the process area.

### Data Search:

To the best of FMC's knowledge and extensive experience with this particular intermediate, MOP is not contained in other end-use products and documentation supporting this claim will be submitted to EPA as an addendum.